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Jim Anderson, Portland Harbor Section Manager
Department of Environmental Quality
Northwest Region Portland Office
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-4987

Re: Comments on the September 2005 Portland Harbor Joint Source Control Strategy

Dear Mr. Anderson:

The Port of Portland (Port) has reviewed the Interim Final version of the Portland Harbor Joint Source Control Strategy (JSCS) dated September 2005 that was prepared by the Oregon Department of Environmental Quality (DEQ) and the US Environmental Protection Agency (EPA). The Port appreciates DEQ and EPA's commitment to obtaining timely information on sources to inform the Remedial Investigation/Feasibility Study (RI/FS) and Record of Decision (ROD) for the Portland Harbor Superfund Site. The Port supports the comments submitted by the Lower Willamette Group (LWG). This letter provides the Port's general comments on the JSCS followed by more specific comments on the proposed Framework for Portland Harbor Storm Water Screening Evaluations (Appendix E). We would appreciate an opportunity to meet and discuss these comments with you further.

COMMENTS

1) Timeline and Resources for Implementation are Unclear

The JSCS states that the overarching goal is to identify, evaluate, and control sources of contamination that may impact the Willamette River in a manner consistent with the objectives and schedule for the Portland Harbor RI/FS. However, given the extremely conservative nature of the screening process, there will be few upland sites within the Portland Harbor that will "screen out" of the process for every media, and most will fall into a weight-of-evidence evaluation to determine whether source control is needed. The JSCS document does not clearly outline how the timeline stated in the overarching goal will be met or where DEQ will obtain the resources to complete such a commitment. Although the Port agrees that it is not necessary for the weight-of-evidence evaluation process to be detailed in the JSCS, the Port does believe that it is important for DEQ to quickly formulate a plan for how those evaluations will be carried out. It is critical for the success of the Portland Harbor cleanup that high- and medium-priority sites be identified and the weight-of-evidence process be completed at these identified sites by the time EPA issues the Portland Harbor ROD.

2) Prioritization Method is Not Clearly Described Nor Adequately Developed

The prioritization method in the JSCS relies upon screening of "all available pertinent" data against Screening Level Values (SLVs). Based on this screening, sites will be ranked as Low, Medium, or High Priority. A facility will be ranked as High Priority based on a "significant" exceedance; however, the document does not define what is considered a "significant" exceedance. Nor does the document describe how this will be applied consistently across all of the facilities screened. Without a clear understanding of what is meant by a significant exceedance, a consistent application of these ranking criteria does not appear to be possible. In addition, there are many important considerations for site prioritization that do not appear to be considered in the ranking process. These include the location, extent, magnitude (from a perspective of both concentration and mass loading), and duration of SLV exceedances; whether a complete transport pathway to the river exists or likely exists; fate and transport considerations; and the magnitude of any anticipated impacts on the in-water environment. A weight of evidence approach intended to understand the real importance of the sites relative to the actual risks to human health and the environment would be more useful for the prioritization of sites. Finally, there is no category for sites where no further action is needed. The JSCS needs to include an option to exit the source control process for sites that don't initially screen in or for sites where source control efforts are complete.

3) SLVs are Not ARARs and Should Not Be Represented as ARARs in the JSCS

DEQ, in previous public meetings, has stated that the proposed SLVs will be used solely for the purpose of screening upland sites in or out of the process (e.g., to assist in establishing a site's priority ranking). The JSCS, as currently written, does not clearly state that this is the intent of the SLVs, and in places appears to confuse SLVs with applicable and relevant or appropriate requirements (ARARs). It is recommended that the document more clearly establish that the SLVs will be used as a screening tool only, after which, if a site is screened as a Medium or High Priority site, a weight-of-evidence approach will be used to assess whether source control is warranted based on a potential unacceptable risk to human health and the environment.

4) Clear, Consistent Weight-of-Evidence Process Needs to Be Defined

As stated above, the use of very conservative SLVs will by default cause many sites to be ranked as medium priority, requiring a weight-of-evidence approach to determine whether the site presents an unacceptable risk to the river. As also stated above, the Port recommends that a weight-of-evidence approach be used to prioritize all sites. Therefore, the weight-of-evidence process will be a critical part of the overall source evaluation and, ultimately, the successful implementation of the JSCS. A consistently applied, well understood weight-of-evidence process needs to be developed, described, and implemented by DEQ to meet the stated goals of the JSCS document.

5) Stormwater Discharge Evaluations are a High Priority and Should Incorporate All Available Evaluation Tools and Be Consistently Applied Harborwide

Stormwater discharge evaluations are essential to completing the conceptual site model and developing risk-based Preliminary Remedial Goals (PRGs) for the Portland Harbor RI/FS. As such, these evaluations need to be considered high priority for the JSCS, and they should be addressed by DEQ by 2006 or early 2007. In its present form, the JSCS relies on a combination of

catch basin sediment and whole stormwater sampling. Both of these can be helpful tools in identifying discharges that will likely pose an unacceptable risk to the river; however, these tools are often not adequate to definitively determine that a discharge will not pose an unacceptable risk in the context of the Portland Harbor Superfund Site. All available tools for assessing the contribution of stormwater to impacts on the river (including in-line sediment traps) should be included, and a consistent stormwater assessment approach utilizing these tools should be developed for sites that could be impacting the Portland Harbor Study Area.

It is well known that some constituents of interest may be present in stormwater at very low concentrations. These concentrations can be so low as to be undetectable in whole stormwater even given the best available chemical analysis technology. Because many of the constituents of interest are strongly bound to particles that travel with the stormwater, it is important to sample the particles associated with the stormwater flow. Sampling of sediments in catch basins is one approach to this. However, catch basin sediments may or may not be sufficiently representative of the particles present in the stormwater flow. In particular, the sediments present in catch basins may represent only the most coarse grain size fraction of the particles transported, they may represent the particles deposited toward the end of a runoff event, or they may represent particles that have been resident in the catch basin for very long times and thus not associated with current drainage basin conditions.

In-line sediment trap sampling has been used successfully at other large waterfront Superfund sites in EPA Region 10. The Port is currently implementing this technology at its Terminal 4 facility to aid in a recontamination assessment being conducted in conjunction with the Early Action at the facility. The results of the in-line sediment trap sampling provide information on the concentration of constituents of interest adhered to particles associated with a particular portion of the flow emanating from a drainage basin. This information is critical for a comprehensive understanding of the potential cumulative impacts of stormwater discharge to the river. The methods for installation, use, retrieval, and data processing related to in-line sediment traps are well understood. Based on its experience at the Terminal 4 Early Action project, the Port believes that it is critical to all in-line sediment trap sampling to the list of suggested methods for direct discharge screening.

SPECIFIC COMMENTS ON APPENDIX E

In addition to the general comments on the JSCS approach for evaluating stormwater discharges, the Port has the following specific comments on Appendix E – Framework of Evaluation of Stormwater Discharges to Portland Harbor.

- The scope of Appendix E (e.g., Section 1.1 and Section 2.3) appears to focus only on industrial stormwater discharges subject to industrial stormwater permits within the Portland Harbor Initial Study Area. In order to provide a complete evaluation of stormwater and meet the overarching objective of the JSCS, Appendix E should be revised to include an evaluation of all public and private stormwater discharges to the Study Area (River Miles 2 to 11). Appendix E should therefore include a discussion and evaluation of other private stormwater outfalls, municipal stormwater outfalls, and City Combined Sewer Overflows (CSOs) located within and directly upstream of the Study Area, which drain commercial areas, parking lots, streets, rights-of-way, and residential areas.

- Section 2.2 states that available storm water system construction data and site hydrogeologic data should be assessed to determine if the storm water system (both piping and backfill materials) might intercept and preferentially transport contaminated groundwater. The purpose of the framework is to evaluate the storm water pathway at Portland Harbor upland sites. Preferential migration of groundwater along storm water pipes and storm water system backfill does not fall under this purpose. Preferential migration of groundwater should be addressed under assessments of upland facilities soil and groundwater (DEQ's preliminary assessment and remedial investigation process) instead of through the JSCS.
- Section 3.2 states that catch basin sediment screening is intended to precede the storm water screening, so that analytical results from the catch basin screening can be used to refine the site-specific storm water analytical suite. As detailed in Comment 5, above, catch basin sediment would be more representative of coarse grained material with Chemicals of Interest (COIs) with high particle affinities whereas whole storm water samples would be more representative of COIs that tend to stay in the dissolved phase. By screening out COIs based on catch basin sediment samples, dissolved phase COIs may be overlooked. Similarly, results from waste disposal characterization of catch basin cleaning solids should not be used in developing site-specific COIs unless there has been no change in facility operations. Finally, if catch basin sampling is conducted without first cleaning out the catch basin, the results will be biased to include both current particulate matter that is moving through the storm water system plus relict particulate matter that has settled out in the past.
- Section 3.3 states that analyzing both catch basin solids and storm water discharges may help to better understand the storm water pathway and the relationship between catch basin solids and storm water discharge. As detailed in General Comment 5, above, in-line sediment trap sampling and evaluating particulate matter in the storm water provides additional, and often more pertinent data for evaluating potential impacts from current discharges. Collection of total suspended solids and total dissolved solids when collecting whole storm water samples will also be helpful in interpreting the data and evaluating mass loading.
- Section 5.4 describes storm water sampling methods. Because COIs are often present at low concentrations in whole storm water, large volumes of water sample are necessary to obtain meaningful detection limits. It may not be possible to obtain adequate volume from a grab sample of storm water. Composite samples of storm water, over the course of one or multiple storm events, would give higher volume samples and thus increase the likelihood of meaningful detection limits. However, even with a large volume sample, the analytical technology is not dependable enough to ensure detection of COIs present at very low concentrations. Use of in-line sediment trap sampling, in conjunction with or instead of catch basin sampling can provide the data needed to determine whether these COIs are present and their potential impact on the river.
- Section 6 states that as a first step, exceedances of storm water or catch basin SLVs may require implementation of readily implementable Best Management Practices

(BMPs). It may be premature to require implementation of BMPs before additional analysis is done. Specifically, an analysis of the mass balance of COIs entering the river and ultimately depositing on the sediment surface should be conducted.

As mentioned above, Port representatives would be happy to meet with DEQ staff to discuss technical options for implementing this program (in particular, the weight of evidence approach). We have learned much from the Terminal 4 recontamination analysis, which is being conducted in conjunction with the Terminal 4 Early Action, and believe this information can be useful in establishing a consistent, scientifically sound protocol for determining whether a site poses a risk to the in-water system. If you have any questions or would like to arrange such a meeting, please contact Jim McKenna at 503-944-7325.

Sincerely,



Cheryl R. Koshuta
Director, Environmental Affairs

c: Lower Willamette Group